

STATEMENT OF NICHOLAS A. SABATINI, ASSOCIATE ADMINISTRATOR FOR AVIATION SAFETY, FEDERAL AVIATION ADMINISTRATION, BEFORE THE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON AVIATION, ON FAA SAFETY OVERSIGHT, SEPTEMBER 20, 2006.

Chairman Mica, Congressman Costello, Members of the Subcommittee:

I am pleased to appear before you today to discuss the current state of Federal Aviation Administration (FAA) aviation safety oversight. My primary message to you today is that despite the tragic accident that took place in Lexington, Kentucky last month, the safety record of aviation in the United States (U.S.) is extraordinary. And while the Kentucky accident serves as an important reminder that our work as safety professionals is never done, we remain in the midst of the safest period in aviation history. Since 2001, U.S. scheduled air carriers have transported approximately 2.2 billion passengers, or seven times the population of our country. Over that time period we have had a total of seventy-eight passenger fatalities.

All of us who work for or with aviation professionals can take pride in the results of our collective efforts, especially given the economic turbulence that has been experienced by U.S. carriers in recent years. I am here today to commit to you that, while I take great pride in the current state of aviation safety, the FAA has no intention of becoming complacent. Aviation is extremely dynamic and FAA must be prepared to not only keep pace with, but stay ahead of changes in the industry. It is in that context that I would like to share with you where we are in terms of aviation safety today, the challenges we face now and in the future, and how we intend to address them.

In the early 1990's, the Boeing Company projected that if the aviation industry did not take strong preventive measures in safety initiatives in commercial aviation, the projected growth in operations over the next 20 years would increase the number of hull loss accidents worldwide to approximately one every week. This was a wake up call to all who worked in and cared about aviation. Because of work done collectively by government, industry, and operators, today a fatal accident occurs about every 15 to 16 commercial million flights. This is a far cry from what Boeing predicted, and is an accomplishment for which we can all be proud. Today, commercial airline accidents are so rare that when they do occur, they are big news, as we recently experienced. In the glare of all the media, it is sometimes hard to fully appreciate the magnitude of the achievement that our safety record reflects. By no means do I want to downplay the Kentucky accident, but it must be put into context so the flying public understands that our system is extremely safe. In fact, pilots are actually safer on the job than when they are not at work.

It is also important to understand that FAA's commitment to aviation safety is not limited to commercial operations, and that we are meeting our safety goals in general aviation as well. We are in the midst of a major revitalization in that segment of the industry that is due, in large part, to legislation Congress passed in 1994 - the General Aviation Revitalization Act. The General Aviation Manufacturers Association (GAMA) recently announced record breaking shipment and billing figures. Over the past year, FAA issued approvals for new general aviation airplane designs, such as Sino Swearingen's SJ-30,

Cessna's Mustang, and Eclipse's 500 model. These new aircraft, and the introduction of the light sport classification of aircraft and pilots last year, represent growing segments of general aviation and the continued evolution of our system. FAA sets tough safety improvement targets for general aviation expressed as a "not-to-exceed" number of fatal accidents, which decreases every year. With 10 days left in the fiscal year, we are on target to come in about 10% below our not-to-exceed number. Put more simply, this has been the safest year in general aviation since we started keeping records. General aviation is a vital part of the industry and we are pleased to report that it is so robust and safer than ever.

Turning to the area of air cargo, there are two primary operational federal aviation regulations (FAR) overseeing air cargo, FAR part 121 for operators of larger aircraft, and FAR part 135 for non-scheduled operators using smaller aircraft. The part 121 cargo operation per departure hull loss accident rate has consistently improved, and now stands at about one-third of where it was in 1990. Without precise data on the number of departures for the part 135 operators, we track the total number of accidents. A consistent downward trend is also shown for the 135 operators with the number of accidents in 2005 at about half of what they were in 1990.

A review of the accident data indicates that in both types of operations, the accident rates are declining. The trends are coming down. The FAA implemented a number of safety initiatives after the Fine Air accident in 1998, which involved improper loading of cargo. We issued several guidance documents including an Advisory Circular AC 120-85 titled

“Air Cargo Operations.” This AC focuses on cargo loading procedures, cargo handling systems, and weight and balance.

Another area of focus for the FAA is in the Helicopter Emergency Medical Service (HEMS) operations, an industry that has grown rapidly in recent years. These operations are unique due to the emergency nature of the mission. The number of accidents nearly doubled between the mid-1990s and 2004. There were 9 accidents in 1998, compared with 15 in 2004, with a total of 83 accidents from 1998 through mid-2004. The main causes were controlled flight into terrain (CFIT), inadvertent operation into instrument meteorological conditions, and pilot spatial disorientation/lack of situational awareness in night operations.

Safety improvements were clearly needed. That is why in August 2004 the FAA initiated a new government and industry partnership to address these concerns and improve the safety culture of HEMS operators. Working with industry, the FAA developed several short and long-term strategies for reducing accidents. An example was the development of Risk Assessment Program guidance for HEMS operations. Another example was the development and implementation of Air Medical Resource Management Training. As a result of the efforts of the FAA and industry, there has been a marked decrease in accidents in this area.

As I stated at the outset, we recognize that we cannot rest on our laurels. We are constantly looking ahead and working with people in both government and industry to

find ways to make this very safe system even safer. It is not acceptable for FAA to react to changes in the system, we must anticipate them.

With that in mind, what are we anticipating in the years ahead? What are the challenges we will face, and how will we face them? The legacy carriers are undergoing fundamental shifts and changes in their business models. There are significant pressures to reduce costs which have resulted in more and more production and maintenance being outsourced, something I know this Committee has long been interested in. At the same time, commercial airline traffic is rebounding. FAA forecasts commercial airline traffic will triple over the next ten years. In addition to the new large commercial aircraft we expect, such as the Boeing 787 and the Airbus 380, there are many more types of aircraft we know will be introduced into the system. We can expect everything from light sport aircraft to commercial space vehicles; from very light jets (VLJs) to unmanned aircraft systems (UAS). In fact, there are some 20 models of VLJs in various stages of design and production. FAA forecasters predict 4,000 VLJs could be in operation in 10 years.

The growing presence of UAS introduces a number of safety concerns about which I know this Committee is aware. We need to know about the mission, characteristics, requirements, and performance of the many, many different models of UAS. For safety's sake, we need UAS operations to be transparent and seamless. But first and foremost, we must ensure that UAS operating in civil airspace will have no adverse impact to the thousands of aircraft already operating in the national airspace system (NAS). As I

testified before you earlier this year, we are currently working with government and industry to establish standards and metrics to enable us to move forward in this area.

In short, from my perspective we are experiencing the greatest change in the history of civil aviation, yet at the same time U.S. travelers are enjoying unprecedented safety. FAA is committed to maintaining and improving upon this record of performance.

In 1998, FAA began overseeing the ten largest part 121 carriers using the Air Transportation Oversight System (ATOS) model, which goes beyond simply ensuring regulatory compliance. The goal of the ATOS model is to foster a higher level of air carrier safety using a systemic, risk-management-based process to identify safety trends and prevent accidents. ATOS has improved safety because it identifies and manages risks before they cause problems with safety, thus ensuring that carriers have safety adequately built into their operating systems.

To continue to improve aviation safety we must use every tool at our disposal. The most effective way to improve safety is through Safety Management Systems (SMS). Safety Management Systems enable organizations to identify and manage risk far better than before. With this formalized approach, we can identify issues, fix them, and ensure they stay fixed.

Operating under a Safety Management System assures a disciplined and standardized approach to managing risk. The best part is we can review past experience and address

known hazards, and at the same time we can look ahead and rigorously apply Safety Risk Management principles to any changes or introduction of new elements.

Furthermore, under an SMS, the whole process — identifying potential problems and putting corrections in place — is ongoing and the procedure is continuously assessed to make sure it is working.

In short, SMS formalizes risk management, which is imperative as we move from a forensic, or after-the-fact accident investigation approach, to a diagnostic and more prognostic, or predictive, approach. With the accident rate as low as it is, we must get in front of information, analyze trends, and anticipate problems if we are to continue to improve on an already remarkable record of achievement. Operating under a Safety Management System will allow airlines, manufacturers, and the FAA to do this better than before. So that we are all operating from the same approach, FAA must apply the same high standards to ourselves that we require of the entities that we regulate.

We are no longer dealing with “common causes” of accidents. To meet tomorrow’s challenges, we need more data points and the analytical expertise to discern trends and identify precursors. And we need to share what we learn. We have an effort underway called the Aviation Safety Information Analysis System that begins to address this challenge by integrating multiple data bases for a more comprehensive analysis. To keep the pressure on reducing the accident rate, we will need far more information about

trends, about precursors, and about what is going on every day in the manufacturing and operating and maintenance environments.

Turning to a new and slightly different oversight function in my organization, I would like to discuss the Air Traffic Safety Oversight Service. As you know, the Air Traffic Organization (ATO) is a performance-based organization and has the responsibility for internal safety monitoring and compliance with safety standards. Like an airline or other certificate holder, it is important to have an independent safety oversight function of the ATO to ensure the highest level of compliance with established safety standards. We formally established the safety oversight office in March 2005 with 15 Air Traffic Safety Inspectors; currently there are 37 personnel on board. Oversight of the ATO follows the model of our long history of regulating the airlines and service providers such as manufacturers and repair stations.

We have the responsibility to oversee, audit and apply a risk-management based approach to ensure continued safety of air traffic operations. To this end, we have granted approval of an interim Safety Management System (SMS) which will be implemented throughout the ATO. In addition to the monitoring, audits and surveillance of the NAS, we have recently implemented a program to issue credentials to ATO safety personnel modeled on the successful oversight of the aviation industry and airmen. Credentialing will help assure continuous operational safety by providing standards for training, testing, and competency, as well as compliance with the ATO's policies and directives. Our oversight of the ATO has already yielded important safety benefits such

as changes to taxi into position and hold procedures that were based on safety risk management principles. Essentially, our vision is to regulate the ATO in the same way that we would regulate any other certificate holder.

Finally, although it is not a function under my organization, let me summarize where we stand with our efforts on runway incursions. As you know, the FAA, along with pilot groups and industry, has invested a great deal of time and effort to reduce the number and severity of runway incursions in the past several years. Today, the United States National Airspace System (NAS) has nearly 500 FAA and contract tower-staffed airports that handle more than 173,000 aircraft operations — takeoffs and landings — a day, averaging approximately 63 million airport operations per year. Of the approximately 254 million aircraft operations at U.S. towered airports from FY 2002-2005, there were 1,311 reported runway incursions. This translates into approximately 5.1 runway incursions for every one million operations and less than one serious runway incursion for every one million operations. There were six collisions during this period, none of which resulted in a fatality. When viewed in the context of the total number of operations, the number of incursions is low. This tells us that further reducing the rate will be quite a challenge, but a challenge we are embracing.

We have made important progress over the last few years, especially in reducing serious Category A and B runway incursions by more than 40 percent since FY 2001. In FY 2006, we have had a total of 313 runway incursions. Twenty-seven of those were Category A and B incursions, which is fewer than 10 percent of the total. Pilot deviations

are the most common type of runway incursion, they accounted for 55 percent of serious incursions in the past fiscal year. Operational errors/deviations, on the other hand, accounted for only 28 percent of total incursions, but 33 percent of serious incursions which represents a notable change in the distribution of runway incursion types with respect to severity. Unfortunately, in the last fiscal year we had three Category A runway incursions between two commercial jets as a result of operational errors. These are the types of statistics our runway incursion safety team continuously analyzes in order to understand where our efforts will have the greatest impact in reducing risk.

As presented in the FAA Flight Plan 2006-2010, the FAA's performance target is to reduce the number of Category A and B runway incursions to an annual rate of no more than 0.450 per million operations by FY 2010. Analysis of the trend of runway incursions from 2001 through 2005 shows that the rate of reduction flattened, suggesting that the runway safety management strategies that have been implemented early in that period had achieved their maximum effect. Therefore, in order to achieve our stated targets, the FAA must identify new strategies and re-prioritize their application. We are currently deploying and evaluating new technologies that will improve "error tolerance" in the system – as we understand only too well that human error is inevitable.

Mr. Chairman, I recognize that I have just touched on a few of the very many important safety initiatives ongoing at the FAA. I will be happy to talk to you about these or any other safety programs. We are at a critical time in aviation and I want to leave you with a clear understanding of the strength of the commitment that exists within FAA at all levels

of the agency. We are proud of our record, but we recognize that many challenges still await us. I know we have the support of this Committee and that of a dedicated industry as we move forward. This concludes my prepared statement. I'll be happy to answer your questions at this time.

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